525

Network Application Platform

User's Manual

Rev：1.0

Date：2012.03

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Chapter 1 Package Contents

Your mainboard package contains the following items:

1 One D525 mainboard

2 SATA data cable

3 Drives installed CD

4 One user’s manual

Chapter 2 Introduction

Key Features：

-Chipset：

Intel **ATOM D525 + ICH8M**

-CPU：

An onboard low-power INTEL Atom® processors, main frequency D525 as 1.80GHZ, 1MB L2 cache, supports Hyper-Threading technology, which is run at the two thread task.

-Memory：

Supports DDR3 800 Single Channel Mode

Provides 200pin SO-DIMM DDR3 slots

-I/O ：

- Provides two channel connecting two SATA drives

With speed up to 300MB/S

Four serial port

One LPT port

One VGA port

Four USB ports

-Onboard network Card

Onboard two RTL8111DL network Card

-Expansion slot：

One 32-bit PCI slots 2.3 specification compliant

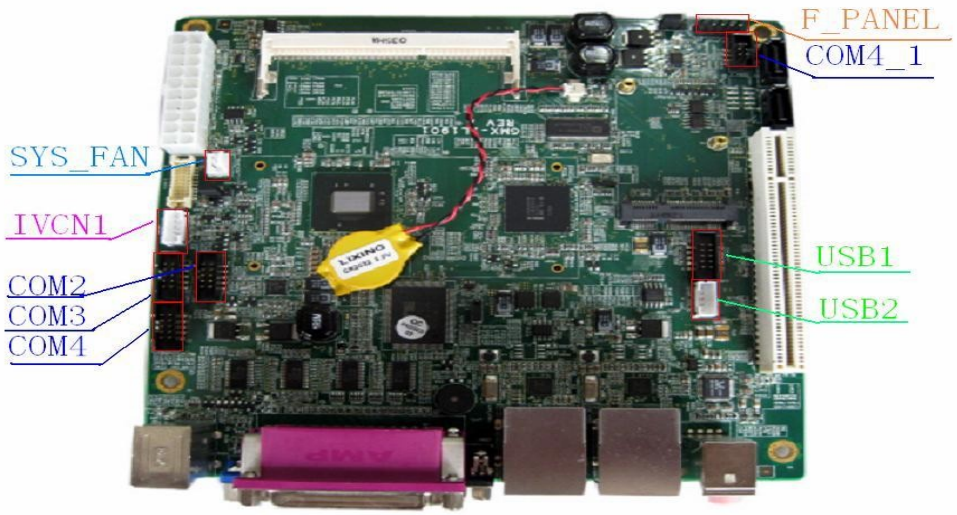
One Mini PCIE port

-Power supply：

ATX standard power mode.

Chapter 3 Layout

Layout



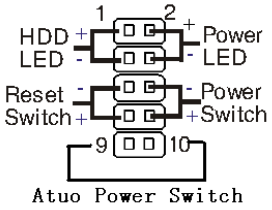
Chapter 4 Rear panel sketch map

Rear Panel	
	The rear panel provides the following connectors

Chapter 5 Installation
The Interface Definition

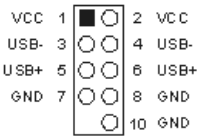
5.1.1 Function Port Panel

FPIO1

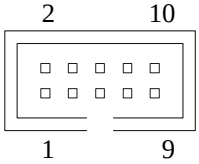


5.1.2 USB Extension Interface

USB2



5.1.3 COM2-COM4 Extension Interface



Pin #	Signal Name
1	DCD, Data carrier detect
2	DSR, Data set ready
3	RXD, Receive data
4	RTS, Request to send
5	TXD, Transmit data
6	CTS, Clear to send
7	DTR, Data terminal ready
8	RI, Ring indicator
9	GND, ground
10	COM VCC

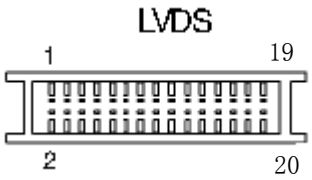
5.3.1 COM4_1

1	GND	2	GND
3	TX485+/422+	4	TX485-/422-
5	RX422+	6	RX422-

5.1.4 LVDS Flat Panel Connector:LVDS CON

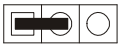
1	+3.3VDC	2	+3.3VDC
3	GND	4	GND
5	RXIN0-	6	RXIN0+
7	GND	8	RXIN1-
9	RXIN1+	10	GND
11	RXIN2-	12	RXIN2+
13	GND	14	RXCLK-
15	RXCLK+	16	GND
17	RXIN3-	18	RXIN3+
19	GND	20	+5VDC

LVDS



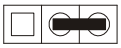
Jumper Settings

5.2.1 Jumper Presentation



1 2 3

Pins 1 and 2 are shorted with a jumper cap.

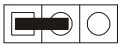
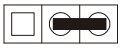


1 2 3

Pins 2 and 3 are shorted with a jumper cap.

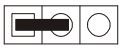
5.2.2 Clear CMOS

J1 is used to clear the CMOS Data in the RTC.

J1	Description
	Normal
	Clear CMOS

5.2.3 LVDS Power Selection Jumper:LCD-PWR

JP2



Pin #	MODE
1 &2short	+3.3V
2 &3short	+5V

5.2.4 COM4 RS232/422/485 Jumper:JP3

JP3

JP3	RS232 / RS422 / RS485 跳选
1-2	RS232
2-3	RS422 / RS485

Memory installation

5.3.1 The system board supports One DDRIII SO-DIMM

1. Single Channel (SC)
   Data will be accessed in chunks of 64 bits (8B) from the memory channels.
2. A DIM module simply snaps into a DIMM socket on the system board. Pin 1 of the DIM module must correspond with Pin 1 of the socket.

1). Pull the “tabs” which are at the ends of the socket to the side.

2). Position the DIMM above the socket with the “notch” in the module aligned with the “key” on the socket.

3). Seat the module ver tickly into the socket. Make sure it is completely seated. The tabs will hold the DIMM in place.

5.3.2 IDE Devices Installation

IDE devices include hard disk drives, high-density diskette drives, and CD-ROM or DVD-ROM drives, among others.

The mainboard support one or two IDE devices. If you connect two

devices to a single cable, you must configure one of the drives as Master and one of the drives as Slave. The documentation of the IDE device will tell you how to configure the device as a Master or Slave device. The Master device connects to the end of the cable.

Other Device Installation

5.4.1 Serial ATA Installation

(7-Pin SATA1/SATA3)

The motherboard bundles the new Serial ATA technology through the SATA interfaces onboard. The SATA specification allows for thinner, more flexible cables with lower pin count, reduced voltage requirement. These connectors support Serial ATA HDDs and allow up to 300MB/s data transfer rate using thin 4-conductor SATA cables. faster than the standard parallel ATA with 133MB/s(Ultra ATA/133)

Note1: The Serial ATA cable is smaller and more flexible allowing easier routing inside the chassis. The lower pin count of the Serial ATA cable eliminates the problem caused by the wide, flat ribbon cables of the Parallel ATA interface.

Hot plug support for Serial ATA drive and connections are not available in this motherboard.

5.4.2 Clear CMOS (Clear RTC RAM)

This jumper allows you to clear the Real Time Clock (RTC) RAM in CMOS. You can clear the CMOS memory of date, time, and system setup parameters by erasing the CMOS RTC RAM data. The RAM data in CMOS, that include system setup information such as system passwords, is powered by the onboard button cell battery.

1、 Turn OFF the computer and unplug the power cord.

2、 Move the jumper cap from pin 1-2(default) to pin 2-3.Keep the cap on pin 2-3 for about 5-10 seconds, and then move the cap back to pins1-2.

3、 Plug the power cord and turn ON the computer.

4、 Hold down the<F1> key during the boot process and enter BIOS setup to re-enter data.

Note1: Except when clearing RTC RAM, never remove the cap on CLRTC1 jumper default position. Removing the cap will cause system boot failure!

Note2: You do not need to clear the RTC when the system hangs due to over clocking. For system failure due to over clocking, use the C.P.R. (CPU Parameter Recall) feature. Shut down and reboot the system so BIOS can automatically reset parameter settings to default values.

Chapter 6 Driver Installation

6.1 Installation Directory

The utility CD is supplied with that mainboard the connects contained in it is showed as below:

Directory	Driver	OS
Inf\INF_9.2.0.1021	Intel chipset software	Windows 2000/XP/Vista
VGA\D410_D510	Intel onboard VGA driver	Windows 2000/XP/Vista
Network\Intel\intel 82574	onboard NETWORK driver	Windows 2000/XP/Vista

Before installing audio driver, you must identify the mode of HD Audio codec. Fox example: If you use Related serial codec, you need to enter into the Related directory installing.

6.2 Intel Chipset Software Setup

Insert the driver CD, running driver software CD, choose the directory: \ CD-ROM:\ Inf\INF_9.2.0.1021\ INF_allOS_9.2.0.1021_PV

Click“NEXT”to continue

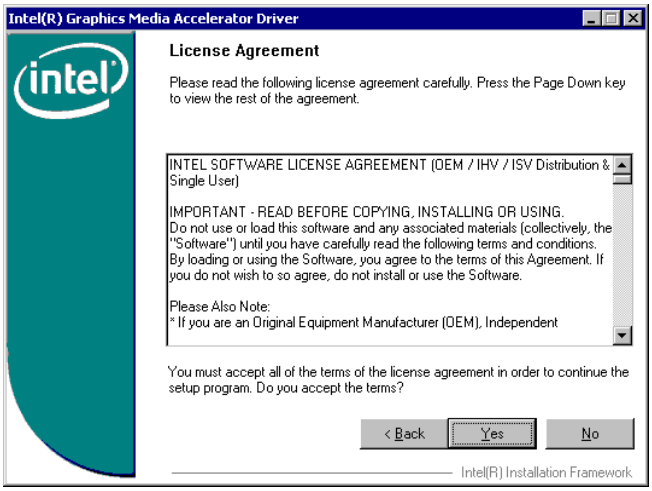
Select“YES” to continue

Select“NEXT” to continue

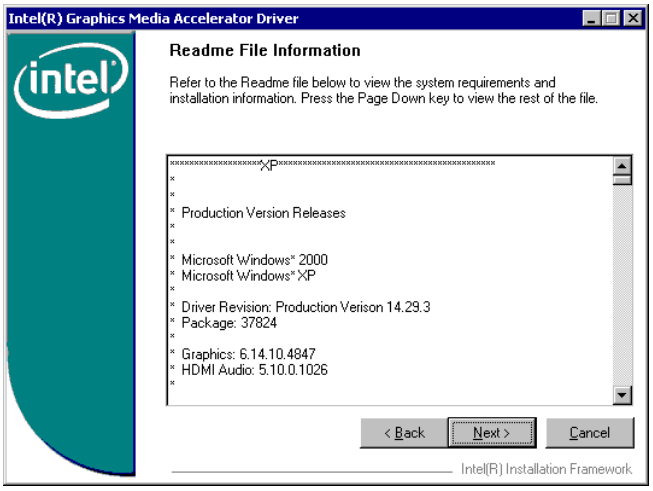
Select“FINISH” to complete the installation.

6.3 VGA Driver Setup

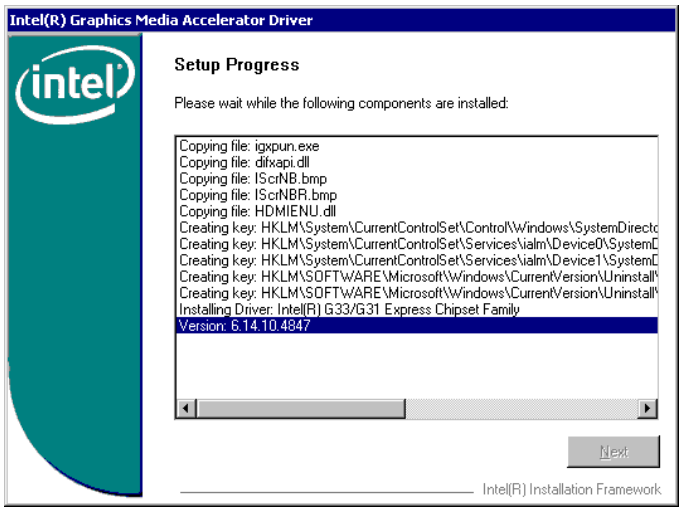
Insert the driver CD, running driver software CD, choose the directory:\CD-ROM:\ VGA\D410_D510\



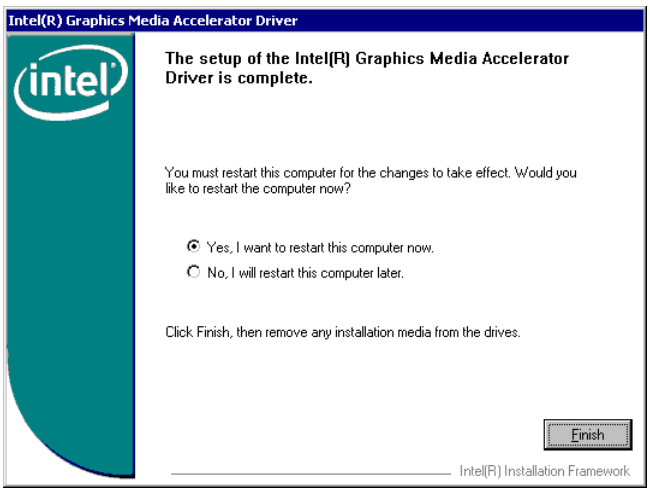
Select“Yes”to continue



Select“Next”to continue



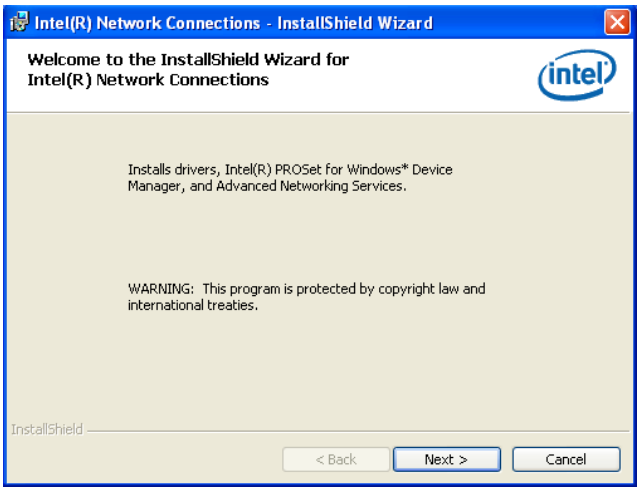
Continue



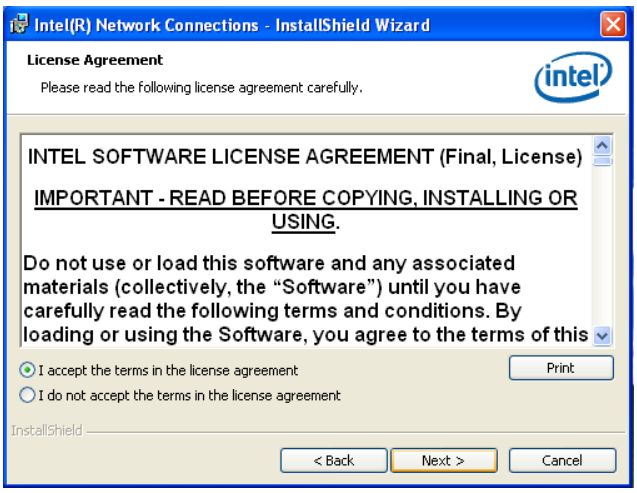
Select“Finish”to complete the installation

6.4 NETWORK Driver Setup

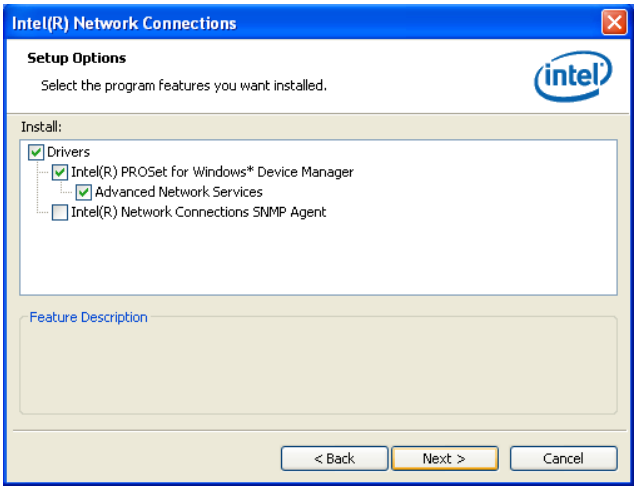
Insert the driver DVD, running driver software DVD, choose the directory: \DVD-ROM:\ Network\Intel\intel 82574\



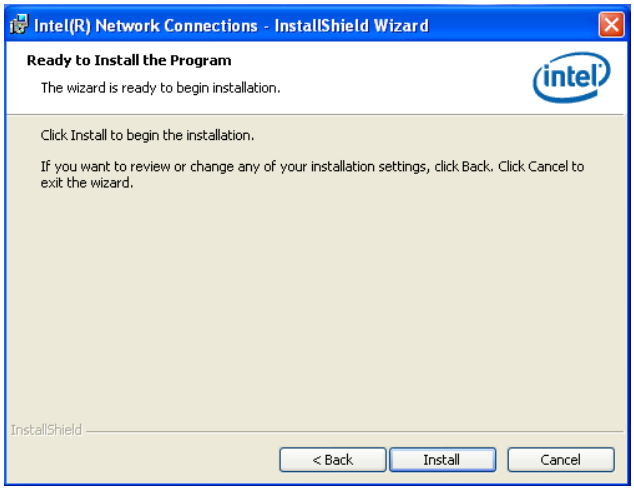
Select“Next”to continue



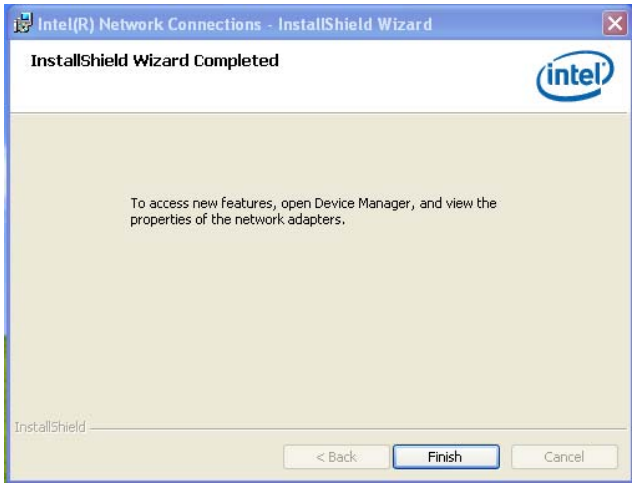
Select"Next"to continue



Select"Next"to continue



Select“Install”to continue



Select “Finish”to continue

Chapter 7 BIOS Setup

7.1 Entering Setup

Power on the computer and the system will start POST (Power On Self Test) process. when the message below appears on the screen, press <DEL> key to enter Setup.

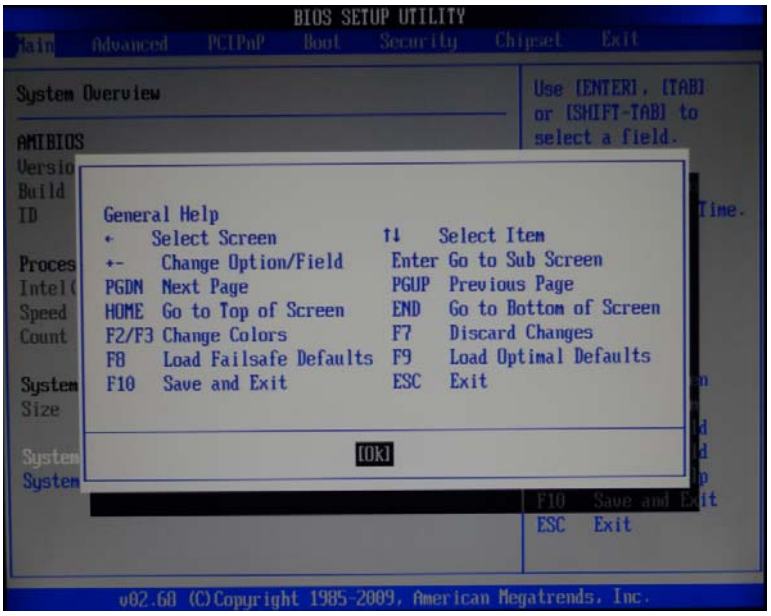
Press <DEL> to run Setup

If the message disappears before you respond and you still wish to enter setup,restart the system by turning it OFF and On or pressing the RESET button. You may also restart the system by simultaneously pressing <Ctrl>,<Alt>,and<Delete>keys.

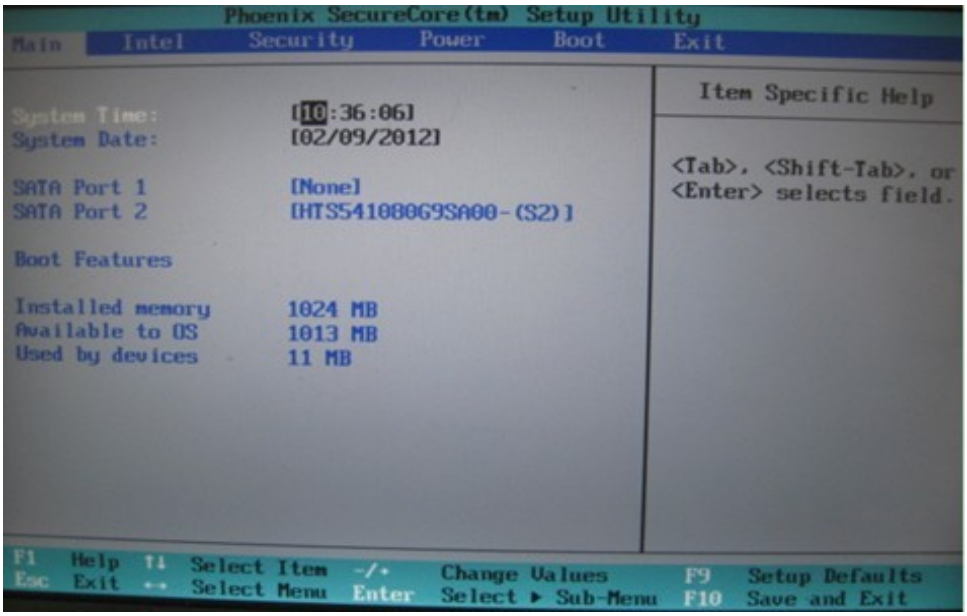
2.Use the arrow keys to select the item and press <Enter> to accept or enter the sub-menu

7.2 Control keys

The BIOS setup program provides a General Help screen. You can call up this screen from any menu by simply pressing <F1>.The Help screen lists the appropriate keys to use and the possible selections for the highlighted item.Press <Esc> to exit the Help screen.

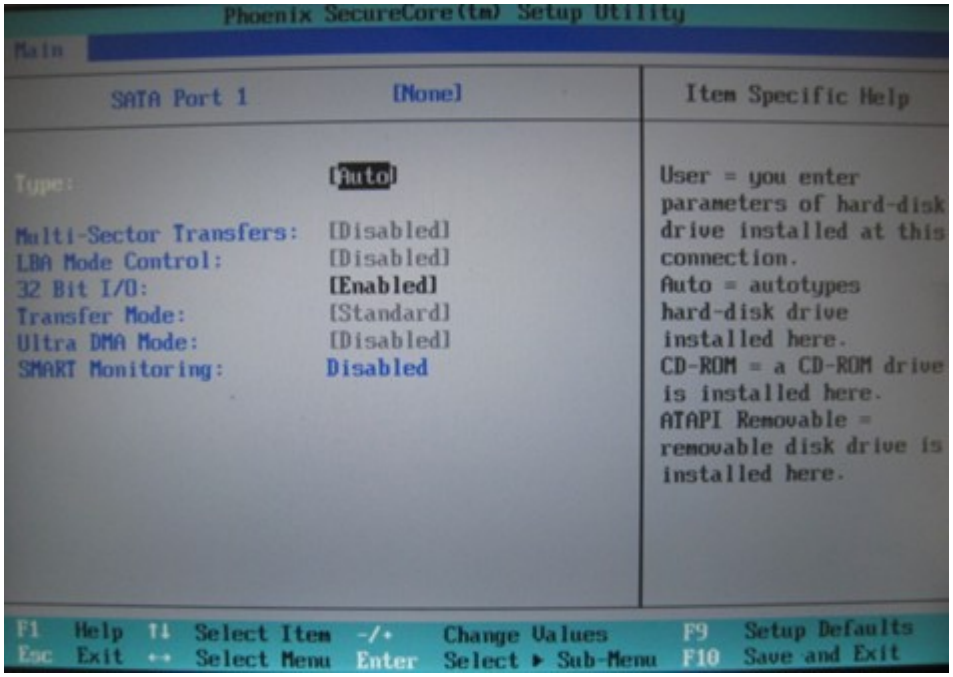


7.3 The Menu Bar



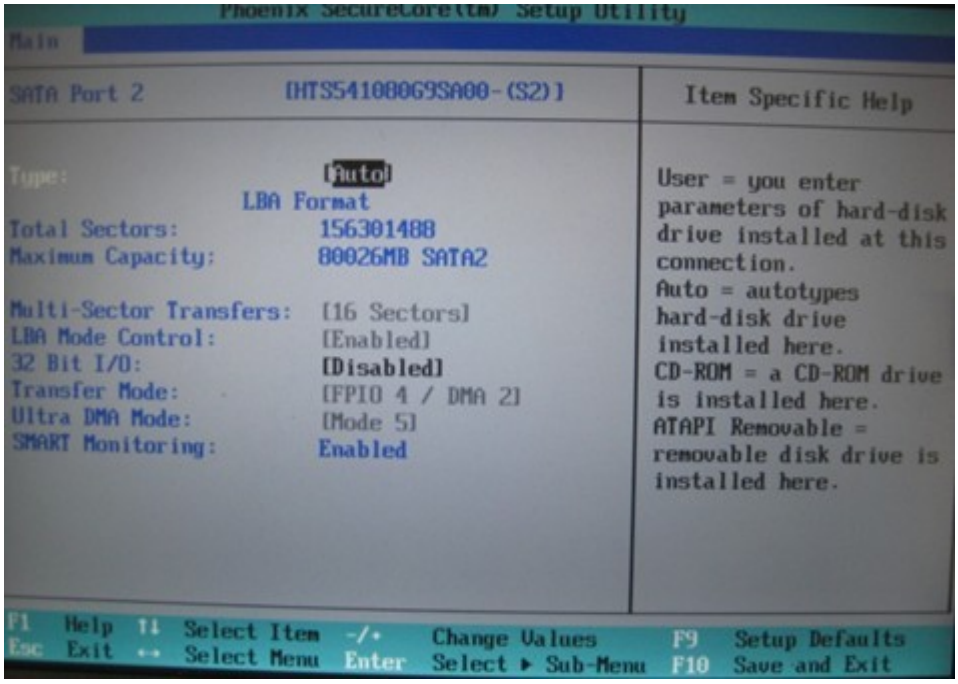
System Time:
System Date:
SATA Port 1/2
Boot Features:
Installed memory:
Available to OS:
Used by devices:

7.3.1 SATA Port 1



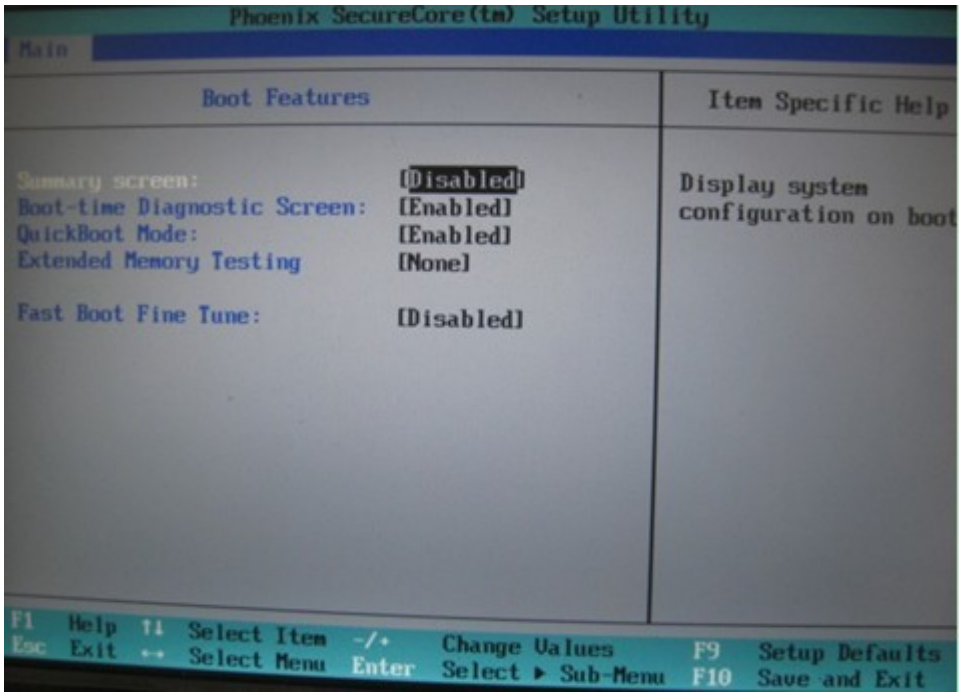
Type:
Multi-Sector Transfers:
LBA Mode Control:
32 Bit I/O:32
Transfer Mode:
Ultra DMA Mode: Ultra DMA
SMART Monitoring: SMART
Enabled、Disabled

7.3.2 SATA Port 2



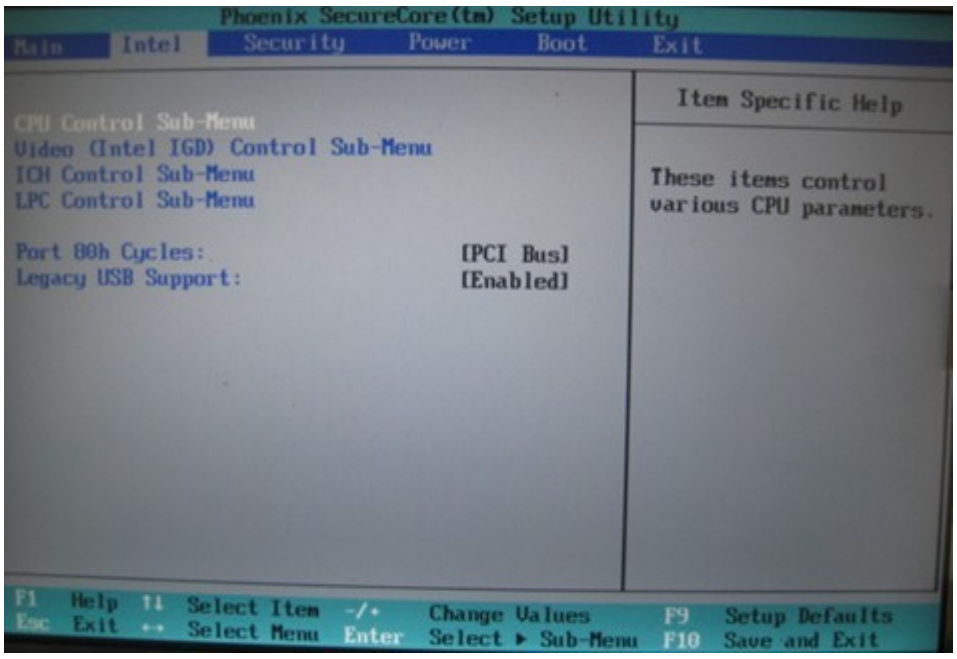
Total Sectors:
Maximum Capacity:
Type:
Multi-Sector Transfers:
LBA Mode Control: LBA
32 Bit I/O:32
Transfer Mode:
Ultra DMA Mode: Ultra DMA
SMART Monitoring: SMART
Enabled、Disabled

7.1.2.3 Boot Features



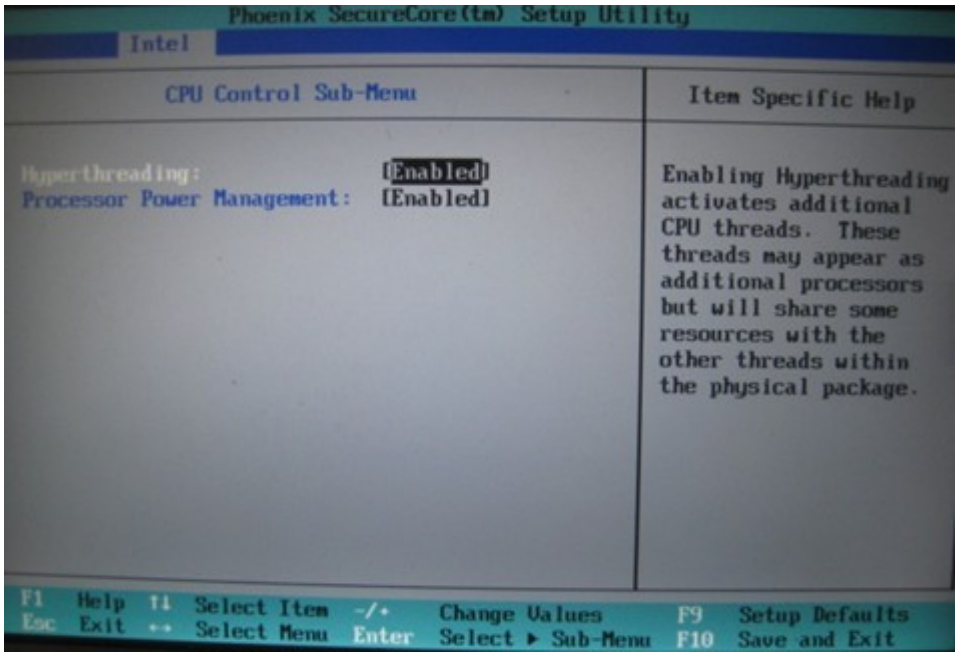
Summary screen:
Boot-time Diagnostic Screen:
Quick Boot Mode:
Extended Memory Testing:
Fast Boot Fine Tune:
Enabled、Disabled

7.2.3 Intel



Port 80h Cycles: 80h
Legacy USB Support:

7.2.3.1 CPU Control Sub-Menu

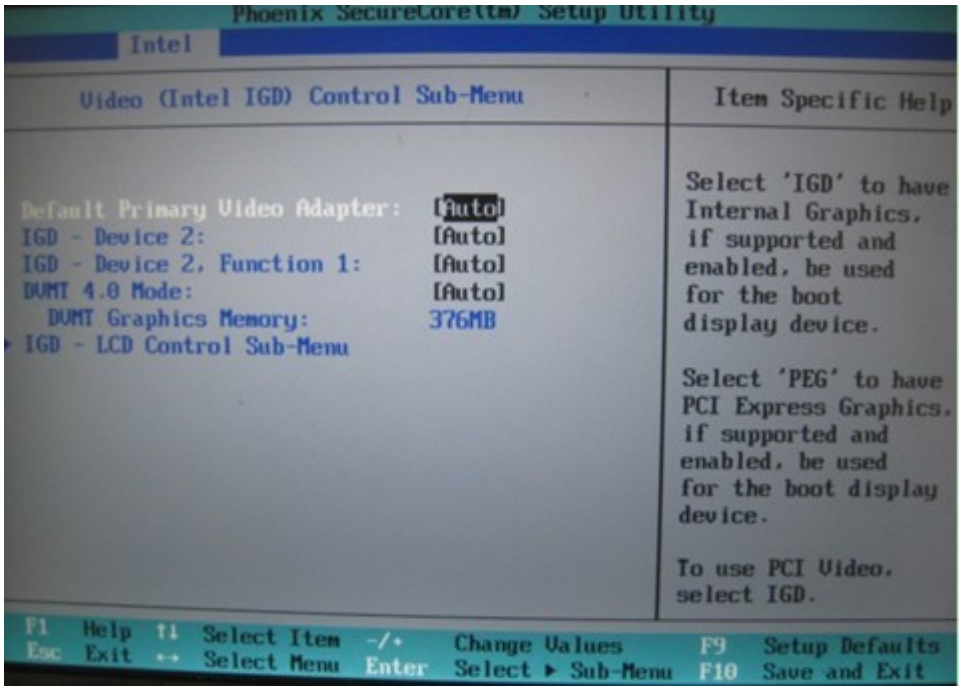


Hyperthreading:

Processor Power Management:

Enabled、Disabled

7.2.3.2 Video (Intel IGD) Control Sub-Menu



Default Primary Video Adapter:

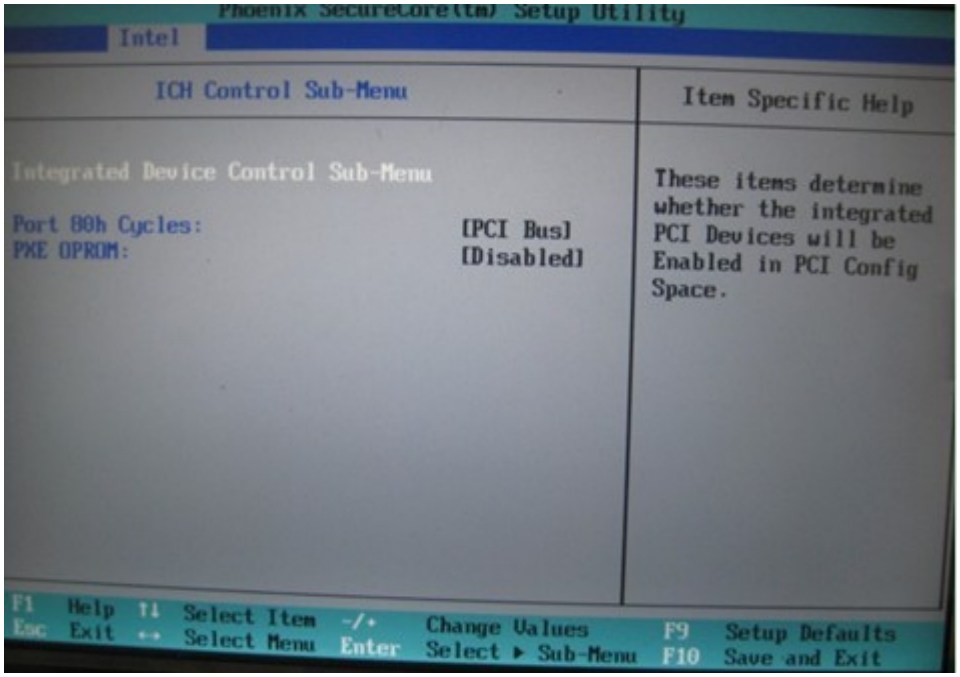
IGD-Device 2: IGD2

IGD-Device 2, Function 1: 1

DUMT 4.0 Mode: DUMT 4.0

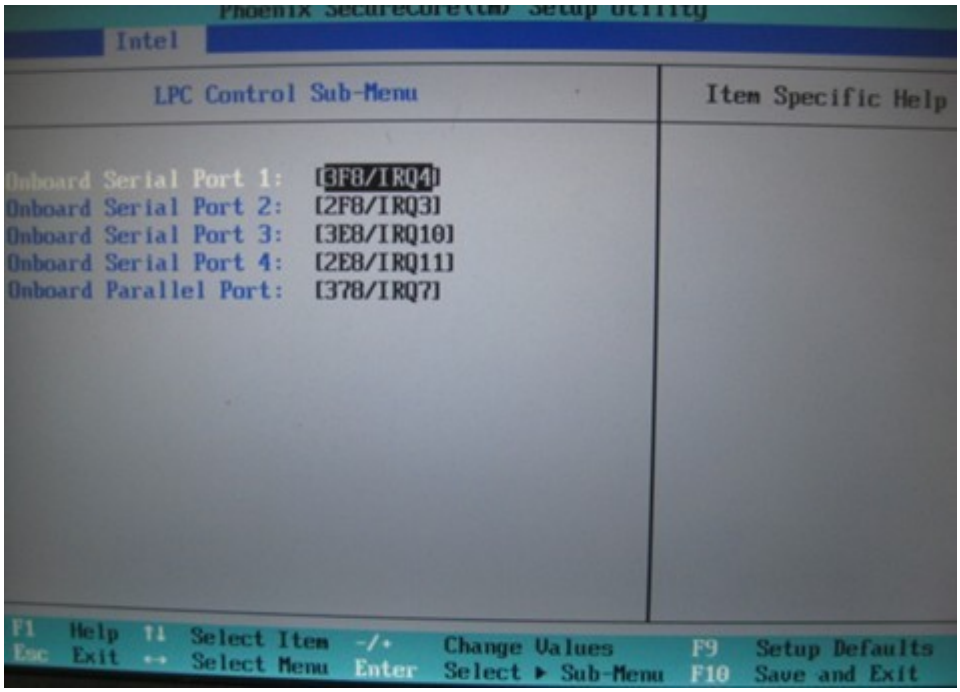
IGD-LCD Control Sub-Menu: IGD-LCD

7.2.3.3 ICH Control Sub-Menu



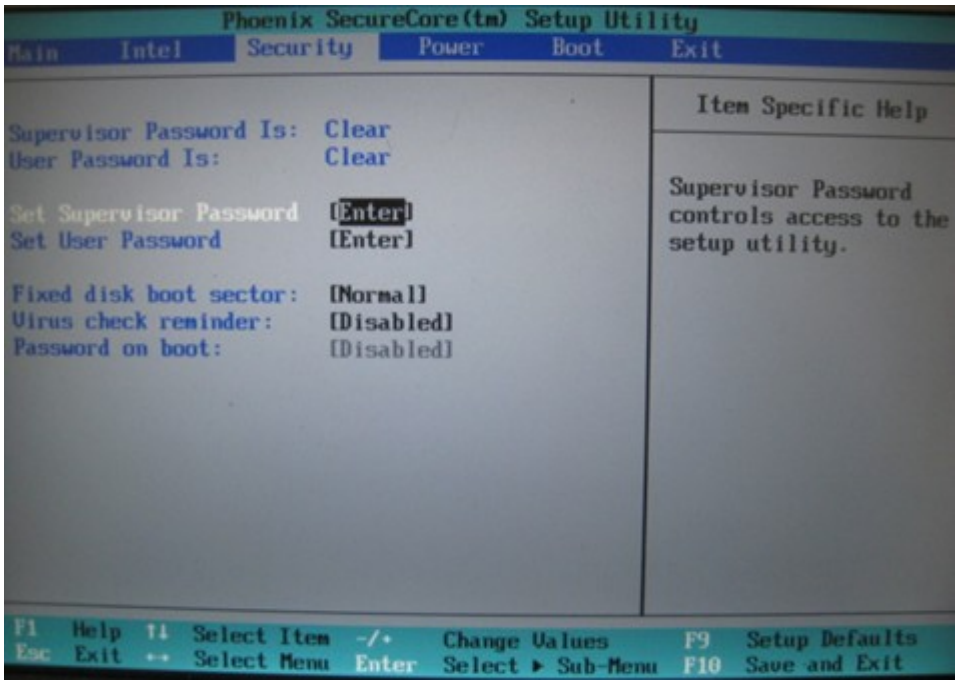
Port 80h Cycles: 80h
PXE OPROM: Enabled、Disabled

7.2.3.4 LPC Control Sub-Menu



Onboard Serial Port:

7.2.4 Security



Supervisor Password Is:

Set:

Clear:

User Password Is:

Set:

Clear:

Set Supervisor Password:

Set User Password:

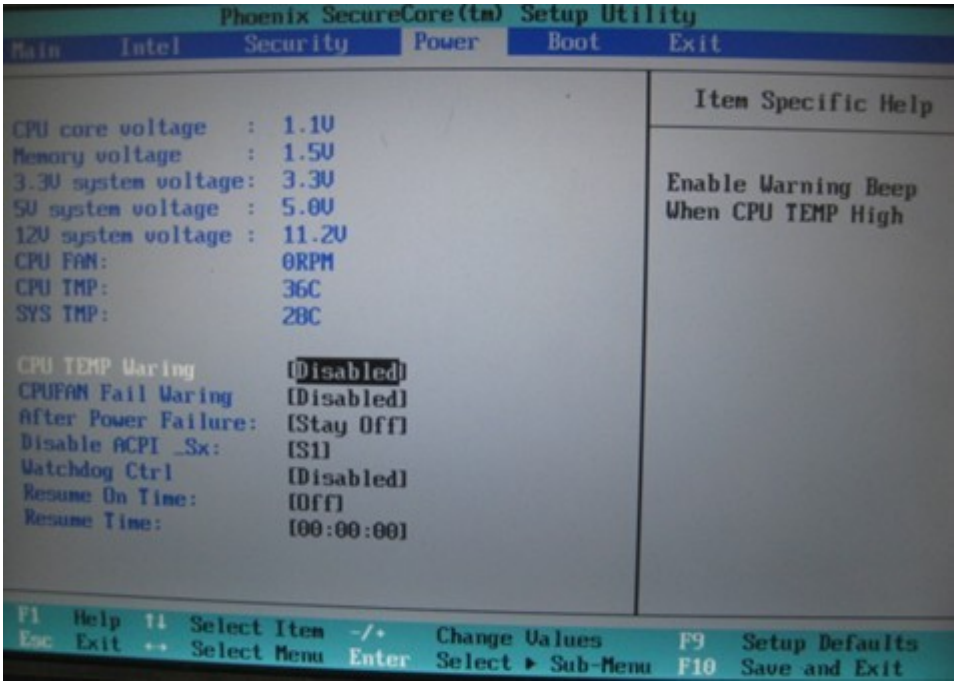
Fixed disk boot sector:

Virus check reminder:

Password on boot:

Disabled Enabled

7.2.5 Power



CPU TEMP Warning: CPU

CPUFAN Fall Warning: CPU

After Power Failure:

Disable ACPI _SX ACPI _SX

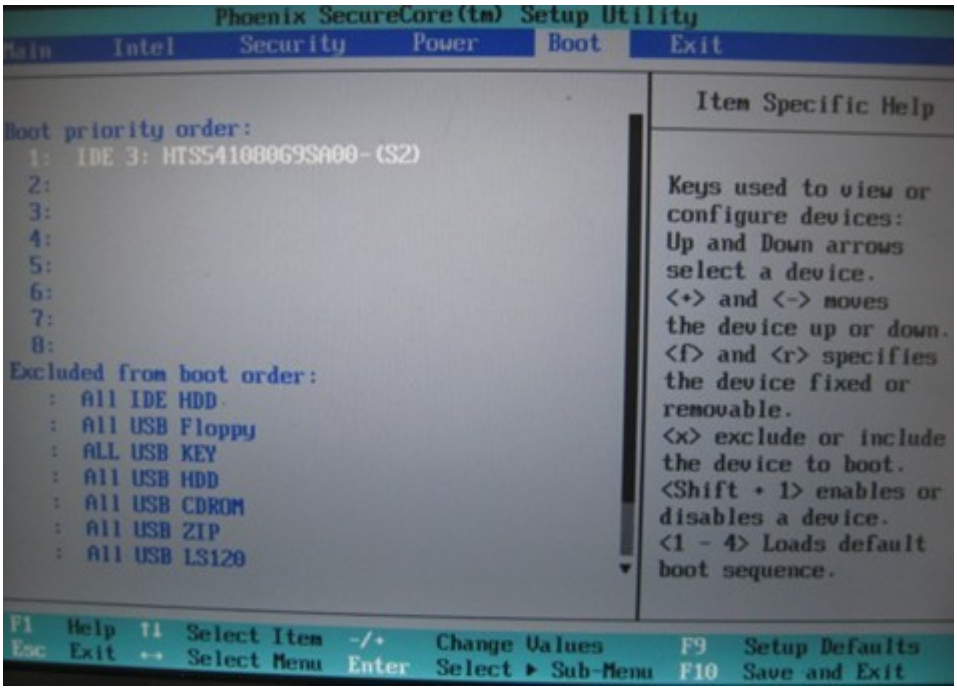
Watchdog ctrl:

Resume On Time:

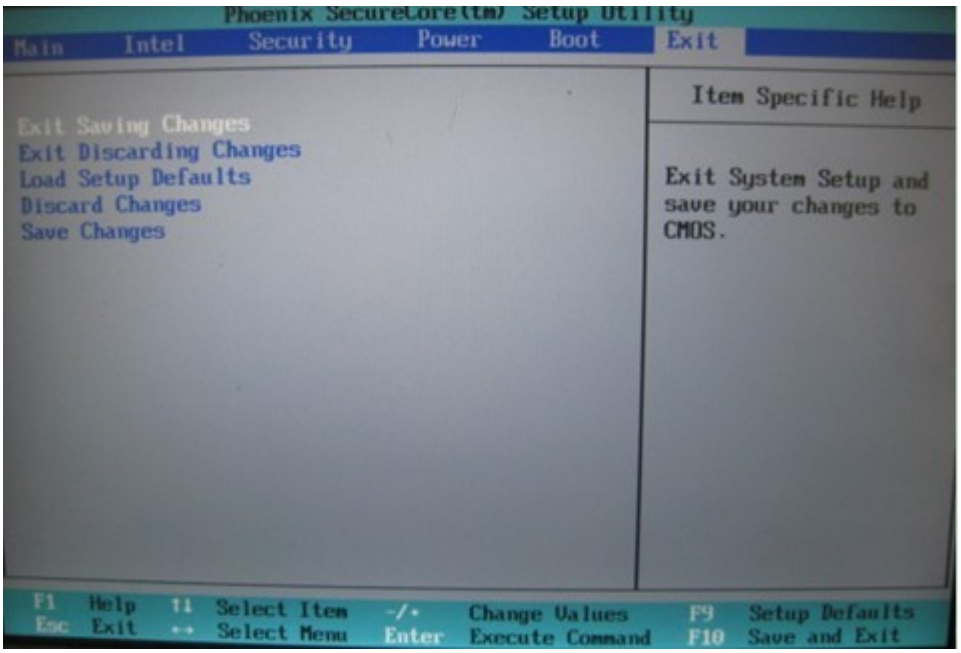
Resume Time

Enabled、Disabled(

7.2.6 Boot



7.2.7 Exit



Exit Saving Changes:

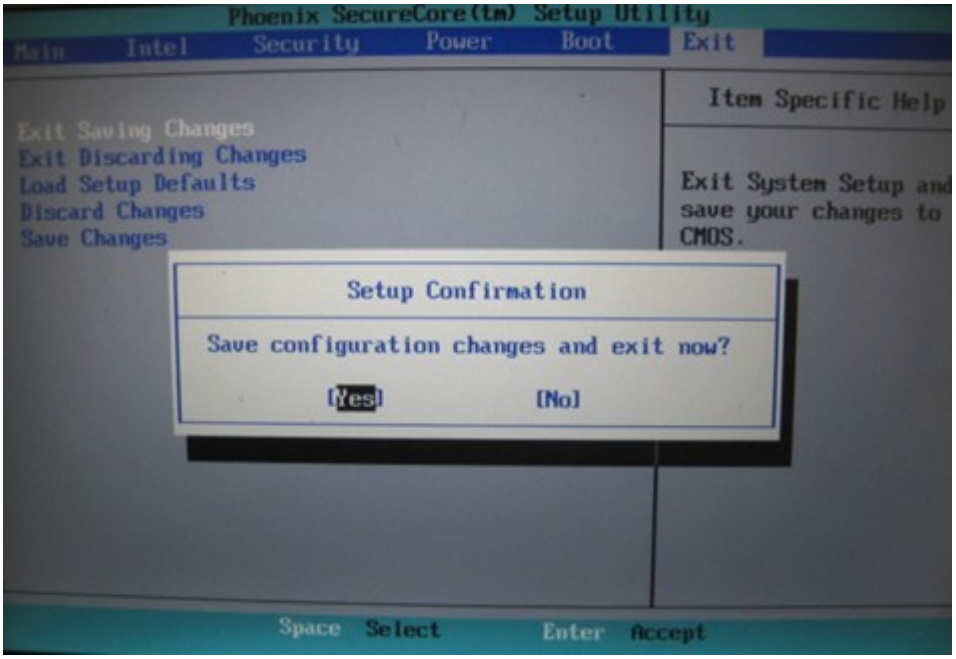
Exit Discarding Changes:

Load Setup Defaults

Discard Changes:

Save Changes:

Exit Saving Changes



F10